Abstract of the Disclosure

A check sum calculation on data coded with a Reed-Solomon error correcting code is performed by applying a byte based polynomial remaindering process to data bytes. The polynomial is $X^2 + X\alpha^2 + \alpha$, over GF (2^8), where α is the primitive element GF (2^8) used to define redundancy coding for individual data groups. The roots of the polynomial used in the polynomial remaindering process differ from the roots of a generator polynomial of the Reed-Solomon error correcting code. The polynomial remaindering process is performed with a sub function mask containing the same mask function as used in defining redundancy coding for a data group or groups. The data group or groups are redundance coded using a Reed-Solomon code over GF (2^8)